

## Systems and Methods for Generating a Route

### Abstract of the Disclosure

Devices, systems, functional data and methods are provided for an improved route generation in navigational enabled devices. The navigational device with route generation capabilities includes a processor communicating with a memory. The memory includes a current location of the device, one or more available locations, and a destination of the device. A display communicates with the processor and is capable of communicating at least a portion of a generated route for the device.

In generating the route, the available locations are inspected repetitively and locations adjacent to a last selected location are inserted into a first data structure such that the first location of the first data structure is always a least cost location associated with all adjacent locations comprising the first data structure. The first location is then optionally inserted into a second data structure. The generated route includes the current location, one or more first locations, and the destination.